another were selected. Valvular and non-valvular patients were identified using appropriate ICD-9 codes. A bivariate comparison of baseline characteristics and outcomes measures was provided. T-test, Mann Whitney U-test, and chi square test were used based on the distribution and standardized differences were calculated. Risk adjustment was done by using the propensity score method with the ProbChoice ™ algorithm. **RESULTS:** Out of 19,268 identified patients, 392 were diagnosed with valvular atrial fibrillation, and 18, 575 with non-valvular atrial fibrillation. Patients were similar in terms of age and gender, but significantly different in terms of comorbid conditions and baseline CHADS score. Patients with valvular atrial fibrillation were more likely to have a Charlson comorbidity score, congestive heart failure, peripheral arterial disease, acute coronary syndrome, obesity, etc. Risk-adjusted outpatient visits (97% vs. 95%), transient ischemic attack (3.57 vs. 1.76), major bleeding (5.61 vs. 2.86), and gastrointestinal bleeding (4.59 vs. 1.56) were all higher for patients with valvular atrial fibrillation. However, risk-adjusted inpatient hospitalization (39.8% vs. 44.77%) and osteoporotic fracture (0% vs. 1.66%) were lower. Overall risk-adjusted costs did not differ ($15, 426 vs. $16,059). **CONCLUSIONS:** Most of the adverse events analyzed were higher for valvular atrial fibrillation patients relative to non-valvular atrial fibrillation patients. However, the economic burden of both groups of patients on the health care system was similar.

PCV56

INCREMENTAL COSTS OF BLEEDING IN PATIENTS WITH ATRIAL FIBRILLATION WITHIN A LARGE, NATIONAL HEALTH PLAN

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OBJECTIVES: Patients with atrial fibrillation (AF) are often chronically treated with anticoagulant or antiplatelet drugs for stroke prevention and are especially vulnerable to bleeding. The objective of this retrospective database analysis was to use administrative claims data from a large, national US health care organization to examine the incremental costs of bleeding events in patients with AF. **METHODS:** Administrative claims data were used to identify patients with AF and bleeding events from January 1, 2002—December 31, 2005 with continuous enrollment for 1 year prior to AF diagnosis. Patients were stratified into 3 sub-cohorts: intracranial hemorrhaging (ICH), major bleeds and minor bleeds. To assess incremental costs, patients with bleeding were matched on age, gender, region, and month of identification to a cohort of patients with AF and no evidence of bleeding. Multivariate analyses were used to estimate the independent incremental cost attributed to bleeding. **RESULTS:** A total of 127,135 subjects were identified with AF, 39.1% of whom had bleeding events. After applying criteria for continuous enrollment and age (≥18 years), a total of 11,266 patients that had evidence of bleeding were identified (1.8% ICH, 10.8% major bleeds and 87.4% minor bleeds). Compared to matched controls, patients with ICH or major bleed incurred significantly more costs over the 1-year follow up period. Mean adjusted incremental total costs over the 1-year follow-up period were $258,968 in subjects with ICH and $88,775 in subjects with major bleeds. Patients with minor bleeds did not incur additional costs compared to controls. **CONCLUSIONS:** Major bleeding associated with AF is associated with significant costs over and above that of AF alone. New strategies that further reduce the risk of bleeding among patients with AF could reduce the cost of their care.

PCV57

THE DIRECT MEDICAL COSTS OF STROKE IN KOREA

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OBJECTIVES: This study sought to examine the direct medical costs of stroke based on the actual hospital charge data in the incidence based cohort. **METHODS:** We obtained the cost data for 884 stroke patients in 8 university hospitals. The cost data targeted for all adult patients (≥19 years) admitted for stroke during 2 month (between November 1 and December 31, 2006) and were assessed for 2 years. The target patients were primarily diagnosed as 'Subarachnoid hemorrhage (I60)', 'Intracerebral hemorrhage (I61)', 'Other nontraumatic intracranial hemorrhage (I62)', 'Cerebral infarction (I63)', and also categorized by history of stroke; 'primary stroke (1st onset)', 'recurrent stroke'. **RESULTS:** According to diagnosis distribution, I60 was diagnosed in 125 patients (14%), I61 in 158 patients (18%), I62 in 25 patients (3%) and I63 in 576 patients (65%). During study period, 85 patients (10%) were died and 471 patients (53%) were assessed for more than 1 year. The annual average direct medical costs for stroke (I60~I63) were KRW 8,530,941 for the 1st year of onset, KRW 1,098,316 for the 2nd year of onset. This result indicated that the 1st year accounted for 89% of 2-year direct medical costs. Analysis by the diagnosis class also revealed that the 1st year direct medical costs for hemorrhagic stroke (I60~I62) were KRW 13,518,895, which were more than double of costs for cerebral infarction (I63), KRW 5,863,771. The 2nd year costs were similar; KRW 1,055,934 for hemorrhagic stroke and KRW 1,115,700 for cerebral infarction. When categorized by history of stroke, the 1st year costs for primary stroke (KRW 8,837,111) were higher than those for recurrent stroke (KRW 5,988,121). **CONCLUSIONS:** This study is significant in that it examined stroke costs including non-reimbursed costs based on the actual hospital charge data while previous studies depended on the insurance claim data in Korea.

PCV58

ECONOMIC BURDEN OF VENOUS THROMBOEMBOLISM IN US HOSPITALS

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OBJECTIVES: There is very limited nationally representative data on the economic burden of venous thromboembolism (VTE), which manifests as deep vein thrombosis (DVT) or pulmonary embolism (PE). The objectives of this study were to assess charges and inpatient length of stay associated with DVT and PE among US hospital discharges. **METHODS:** Data were analyzed from the 2007 Nationwide Inpatient Sample (NIS), which is the largest all-payer inpatient care database in the U.S. containing all discharge data from 1044 hospitals in 40 US states, approximating a 20% stratified sample of US community hospitals. Using a combination of several ICD-9-CM codes, hospital discharges were classified as those with a primary diagnosis of DVT, primary diagnosis of PE, secondary diagnosis of DVT, secondary diagnosis of PE and secondary diagnosis of DVT and PE. Hospital charges and length of stay were estimated for each of these VTE hospitalizations. **RESULTS:** Among all the 39,541,948 hospital discharges in the US in 2007, 172,731 (0.44%) were primary DVT, 155,281 (0.39%) were primary PE, 402,449 (1.02%) were secondary DVT, 118,557 (0.30%) were secondary PE and 30,473 (0.08%) were secondary DVT and PE. The mean length of stay for discharges with secondary DVT (11.3 days), secondary PE (12.0 days), secondary DVT and PE (14.5 days) was substantially more than for discharges with primary DVT (4.9 days) and primary PE (5.8 days). Similarly, the mean (95% CI) total hospital charges for stays with secondary DVT ($73,152; $68,368–$77,935), secondary PE ($80,341; $74,782–$85,900), secondary DVT and PE ($98,205; $89,906–$106,503) was substantially more than for stays with primary DVT ($23,771; $22,572–$24,970) and primary PE ($30,478; $28,912–$32,044). **CONCLUSIONS:** In 2007, the economic burden of VTE in US hospitals was estimated in aggregate at $4.07 billion for primary DVT and $4.65 billion for primary PE hospitalizations. Compared to primary VTE, the inpatient costs were substantially larger for secondary VTE.

PCV59

EXPLORING THE RELATIONSHIP OF COST SHARING AND FIXED-DOSE COMBINATION VERSUS MONO ANTIHYPERTENSIVE MEDICATION THERAPY AMONG HYPERTENSION PATIENTS

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OBJECTIVES: To describe the relationship between the cost-sharing and antihypertensive medication therapy of fixed-dose combination (FDC) versus mono therapy. **METHODS:** Cross-sectional study of all individuals surveyed in the U.S. Medical Expenditure Panel Survey 2006 with at least one hypertension diagnosis, only 30 pills antihypertensive drugs per prescription, and either FDC or mono therapy were included. Bivariate and multivariate generalized linear regression models that controlled for demographic, socioeconomic and drug characteristics assessed the association between the costs and therapy type. Crude and adjusted mean out-of-pocket cost and total payers paid amount were also computed and compared. The 2006 full-year person level sample weight was applied in the statistical analysis. **RESULTS:** The cohort consist of 2,190 hypertension patients with a mean age of 60.3 years, 55.9% female, with average Charlson index of 0.36(rang 0–8) and 35% population were on FDC therapy. The multivariate model that adjusted for demographic, socioeconomic and drug factors, showed FDC therapy had no significant association with out-of-pocket cost with coefficient(95% confidential interval) of 1.0742(–0.9577 to 3.1061), but was negatively associated with the total cost with coefficient of –6.6614(–10.1180 to –3.2048). The crude average increase in out-of-pocket and total payer costs per patient with 30 pills per prescription between FDC versus mono therapy were $6.22(95% confidence interval, $4.42 to 8.02) and $5.67($2.66 to 8.67), respectively, while the adjusted average increase in costs were $1.47($–0.29 to 3.23) and $2.00($–1.02 to 5.01), respectively. **CONCLUSIONS:** The association results suggested that FDC antihypertensive therapy does not affect patient out-of-pocket cost, but FDC therapy reduces payer cost. Considering the number of agents in one pill of the therapy, FDC therapy does not cost significantly more to patient and payer than mono therapy. Our results also provide economic evidence for clinicians to help ease the financial burden from out-of-pocket cost in patients who need two antihypertensive agents therapy.

PCV60

SYSTEMATIC REVIEW OF THE ECONOMIC BURDEN OF VENOUS THROMBOEMBOLISM TREATMENT

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OBJECTIVES: To summarize economic burden associated with treatment of venous thromboembolism (VTE) from payor, patient, and caregiver perspectives by assessing characteristics, outcomes, costs, and cost drivers of treatment. **METHODS:** We conducted a systematic search of MEDLINE and EMBASE databases for US economic studies of VTE published between January 1, 1999 and May 22, 2009. We also reviewed bibliographies of included studies. Studies were critically appraised using the